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In The Claims

Claim 1 has been amended as follows:

1. (Amended) A method for adjusting the optical properties of an anti-reflective coating (ARC) layer comprising the steps of:

providing a preprocessed semiconductor substrate having a SiN_x or a polysilicon layer on a top surface;

depositing a dielectric ARC layer on said SiN_x or said polysilicon layer; and

annealing said dielectric ARC layer deposited on said semiconductor substrate at a temperature of at least 500°C and in a gas comprising at least one element selected from the group consisting of N_2 and O_2 .

Claim 11 has been amended as follows:

11. (Amended) A method for adjusting the optical properties of an anti-reflective coating layer according to claim 1 further comprising the step of annealing said dielectric anti-reflective coating layer for a time period between about 3 min. and about 5 min.

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Claim 13 has been amended as follows:

13. (Amended) A method for adjusting the extinction coefficient (k) of a dielectric anti-reflective coating layer by the steps of:

providing a SiN_x or polysilicon layer covered semiconductor substrate;

depositing a dielectric anti-reflective coating layer of a material selected from the group consisting of SiO_2 , SiON and SiONH on top of said SiN_x or said polysilicon layer; and

heating said semiconductor substrate to a temperature between about 500°C and about $1,000^\circ\text{C}$ in an environment that comprises at least one of N_2 or O_2 .

[Claim 14 has been amended as follows:]

14. (Amended) A method for adjusting the extinction coefficient (k) of a dielectric anti-reflective coating layer according to claim 13 further comprising the step of heating said semiconductor substrate for a length of time sufficient to vary the extinction coefficient of said dielectric anti-reflective coating layer by at least 10%.

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